

# PowerChokes®

## Standard Choke SCB All-Purpose Severe Service

The Model SCB is a forged body, all-purpose severe service choke, available as an adjustable or a positive model.

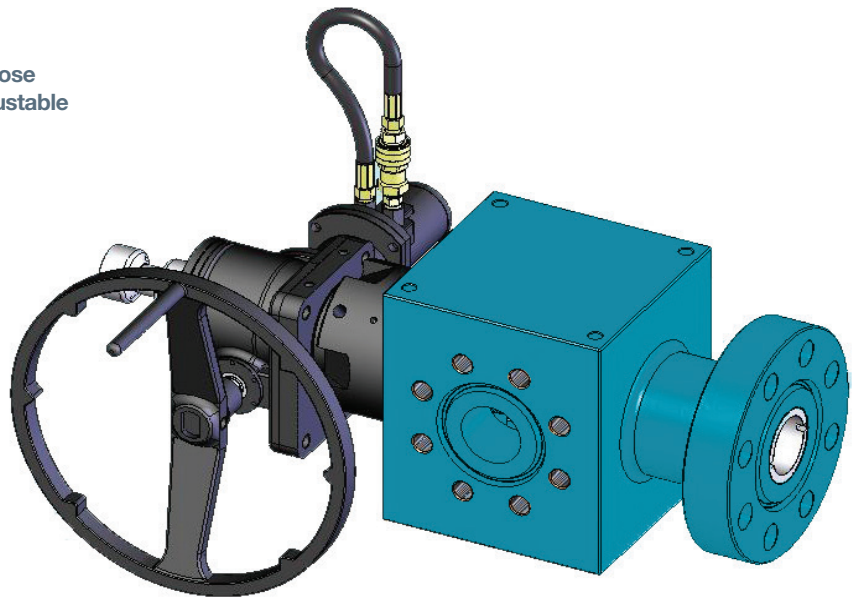
### Features

#### Adjustable Choke

- Worm gear drive actuator – eliminates backlash and provides precise control; self-locking to prevent movement even if hydraulic pressure is lost
- Quick change actuator – no need to disconnect hoses for removal. Trim can be changed in 15 minutes or less without removing the choke from the line or breaking into the manifold
- Accommodates 1 1/2", 2" or 3" trim size
- Manual override capability - provided on all worm gear-operated hydraulic chokes in case of power loss
- Other types of actuator available – in addition to the exclusive modified worm gear actuator, our chokes are available with hydraulic piston, electric or manual actuators
- Reversible gate and seat assembly – provides a minimum of two uses per piece, saving parts, reducing operating costs and maximising efficiency. Can be reversed in the field
- Solid tungsten carbide gate and seat – proven design provides maximum erosion resistance. Gate and seat are precision-ground to provide drop tight shutoff

#### Standard Positive Choke (except Model SCC)

- Quick change bean – bonnet easily removable. Service tools available to remove bean and bean carrier quickly for inspection or replacement
- Numerous bean sizes – accepts 1" (64/64ths) maximum orifice H2-style or OCT-style bean, or a 3" solid tungsten carbide bean seat (192/64ths)



#### All Chokes

- Pressure balanced trim – reduces operating forces, whether the choke is operated manually or automatically. Large balance ports provide protection against clogging
- Downstream wear sleeve and retainer ring – extended-length solid tungsten carbide seat provides wear protection downstream and a smooth transition for fluid into the downstream piping
- Large buffer cavity – slows velocity and distributes impact of solids, maximising trim life

#### Actuator Manipulator Option

- Allows one-man, in-line servicing of chokes
- No lifting device required
- 15-minute service time

#### Control Consoles

- Offer operation for one, two or more chokes and / or hydraulic control valves
- Speed adjusts to allow fast or slow choke movement
- One or two hydraulic pumps plus manual backup hydraulic pump
- Bourdon tube hydraulic pressure gauges or digital pressure gauges available
- Digital position indicator gauge standard
- Accumulators available for power backup or to smooth choke operation

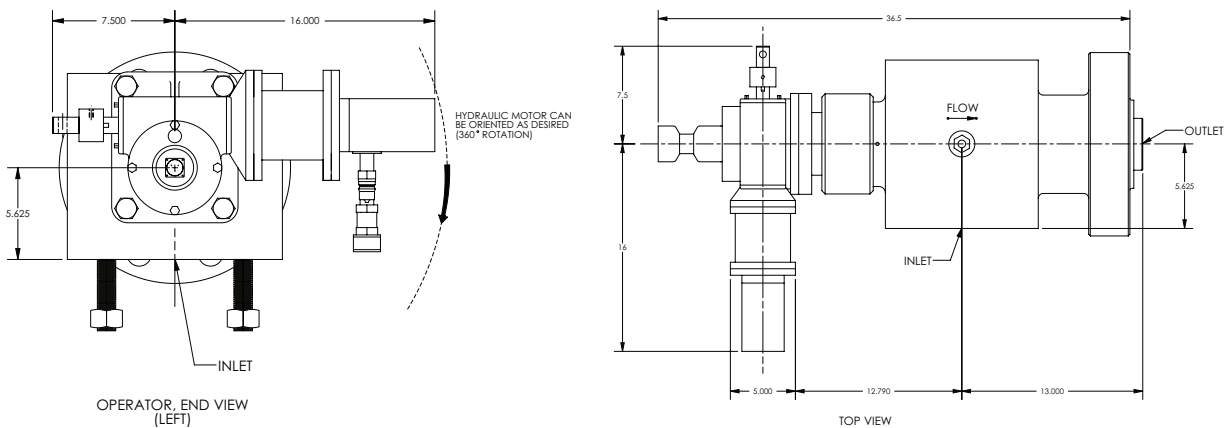
#### Both adjustable and positive Chokes supplied with:

- Bleeder port to bleed pressure from choke body prior to choke bonnet removal for inspection or maintenance
- Studded inlet X flanged outlet standard. Flanged inlets available
- 3 1/16" inlet X 4 1/16" outlet standard for use in API 5M, 10M or 15M service
- Other inlet and outlet sizes available

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### Technical specifications



#### Standard configuration

Reversible, balanced, erosion-resistant trim

|                            |  |
|----------------------------|--|
| Pressure ratings available | API 5,000; 10,000; 15,000 psi  |
| Inlet size ranges          | 1 <sup>3</sup> / <sub>16</sub> " to 7 <sup>1</sup> / <sub>16</sub> " |
| Outlet size ranges         | 4 <sup>1</sup> / <sub>16</sub> " to 7 <sup>1</sup> / <sub>16</sub> " |
| Trim sizes available       | 1 <sup>1</sup> / <sub>2</sub> ", 2" or 3"                            |
| Testing                    | API 6A, API 16C  |
| Body material              | API 75K, impact tested<br>IAW NACE MR01-75                           |
| Throttling trim material   | Tungsten carbide   |
| Seat material              | Tungsten carbide   |
| Seat leakage               | Drop tight   |
| API temperature ranges     |  |
| Standard                   | -20°F to +250°F (-29°C to +121°C)                                    |
| Optional                   | -75°F to +350°F (-60°C to +177°C)                                    |
| API 6A PSL                 | 1 - 3, 3G  |
| API 6A PR                  | 1 - 2  |

#### General design specifications

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| Maximum open for controllability  | 85%                                 |
| Minimum open for controllability  | 2%                                  |
| Maximum exit velocity             | 1.0 Mach                            |
| Max. downstream velocity (Gas)    | 0.3 Mach                            |
| Max. downstream velocity (Liquid) | 100 - 200 ft/sec                    |
| Hydraulic operating pressure      | 1,800 psig                          |
| Seat leakage                      | Drop tight<br>Exceeds ANSI class V) |
| Throttling pressure drop          | Full-rated pressure                 |